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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/717,744	11/20/2003	Felix M. Sciulli	340058.534D1	8795

500 7590 08/03/2006

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EXAMINER
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PRONE, JASON D

ART UNIT	PAPER NUMBER
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3724

DATE MAILED: 08/03/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/717,744

Applicant(s)

SCIULLI ET AL.

Examiner

Jason Prone

Art Unit

3724

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 11 July 2006.  
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-6 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1-6 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_.  
5) ☐ Notice of Informal Patent Application (PTO-152)  
6) ☐ Other: \_\_\_\_\_.

### DETAILED ACTION

The purpose of the Non-Final rejection is to give applicant a fair chance to response to the arguments below.

#### ***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 4, and 5 are rejected under 35 U.S.C. 102(b) as being anticipated by Warehime (5,782,673).

In regards to claim 1, Chalmers discloses the same invention including a mixing tube comprising a body (472) having a bore extending there through along a longitudinal axis (138) and being formed to withstand the passage of a high-pressure fluid jet (Title), a collar rigidly fixed to an outer surface of the mixing tube in an upper region of the mixing tube (464, In the position shown in Figure 12, the collar 464 is clearly rigidly fixed to the tube 472, if it were not rigidly fixed the tube would not stay connected to the main body while in use), and the collar being sized and capable of sliding upward through a bore of a cutting head (462) and having a terminal end surface of the collar substantially normal to the longitudinal axis to bottom out against a surface of a member in the bore of the cutting head substantially normal to the longitudinal axis to prevent the mixing tube from being inserted any further into the cutting head (top surface of 464 bottoms out against the bottom surface of 456. Both are normal to 138).

In regards to claims 4 and 5, Chalmers discloses the outer surface of the collar is substantially cylindrical (464), and the outer surface of the collar is substantially frusto-conical (464).

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 2 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Warehime in view Yie (4,555,872). Warehime discloses the invention but fails to disclose the distance from a top surface of the mixing tube to a bottom surface of the collar is 0.02-2.0 inches and the wall thickness of the collar is 0.01-0.2 inches. Yie (4,555,872) discloses specific dimensions for a fluid jet apparatus (Columns 16-17, example II). The support cone (60) with a passage (61) in Yie (4,555,872) is similar to holder (62) and passage (67) in Warehime and would, therefore, be on a similar order of size. Moreover, Yie (4,555,872) teaches a support cone/holder that has a diameter of 0.49 inches with a passage bore diameter of 0.15 inches. In view of the disclosed dimensions in Yie (4,555,872) and that the structure in Warehime and Yie (4,555,872) are on the same order, it would have been obvious to one of ordinary skill in the art, at the time of the invention, to have made the distance between the top surface of the mixing tube and a bottom surface of the collar in Chalmers 0.02-2.0 inches and the wall thickness of the collar 0.01-0.2 inches. Additionally, to any degree that it can be argued

that it is speculative that Warehime is on the same order of size as the fluid jet apparatus in Yie (4,555,872), in view of their similarities in structure and function, such similarities in size would have been obvious to reproduce to meet established standards.

5. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Warehime in view of Yie (4,945,688). Warehime discloses the invention including the collar is surrounded by a nut (458).

However, Warehime fails to disclose the outer surface of the nut being threaded to engage a threaded inner surface of a cutting head.

Yie (4,945,688) teaches that it is old and well known in the art of fluid jet cutting to incorporate an outer surface of the nut being threaded (82) to engage a threaded inner surface of a cutting head (Fig. 1). Therefore, it would have been obvious to one of ordinary skill in the art, at the time of the invention, to have provided Warehime with an outside threaded nut, as taught by Yie (4,945,688), to allow for an alternate well known nozzle attachment.

### ***Response to Arguments***

6. Applicant's arguments filed 11 July 2006 have been fully considered but they are not persuasive. Applicant argues that the mixing tube of Warehime does not incorporate a mixing tube that is rigidly fixed to the collar when the mixing tube is out of the jet assembly. This is true, however, the claim does not differentiate between "in" the assembly and "out" of the assembly. The collar and the tube are clearly rigidly fixed in

Fig. 12 of Warehime. The Office maintains its stance with regard to the dimensions of Yie and Warehime being on the same order.

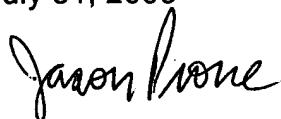
***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason Prone whose telephone number is (571) 272-4513. The examiner can normally be reached on 7:00-4:30, Mon - (every other) Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Boyer D. Ashley can be reached on (571) 272-4502. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

July 31, 2006

A handwritten signature in black ink, appearing to read "Jason Prone". The signature is written in a cursive, flowing style.

Patent Examiner

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Jason Prone

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T.C. 3700